

REMARKS

Claims 1-43 are pending in the current application. Of those, claims 1, 14, 19, 26, and 43 are independent claims. Claims 1, 5, 8, 14, 19, 21, 26-27, and 43 are amended by this Response. New claims 40-43 are added by this Response. No claims are canceled by this Response.

Examiner Interview

Applicant notes the interview conducted on January 22, 2008 with Examiner Khanh Dang. Applicant thanks the Examiner for his time and for discussing the currently pending claims and cited art. Applicant respectfully notes that while the Examiner indicated that the proposed clarifying amendments presented by Applicant in the January 22, 2008 interview would not in his opinion would not overcome Kenny, the Examiner did indicate that he would consider alternative or further clarifying amendments such as those included in the present Response.

Discussion of Example Embodiments

Applicant's specification at paragraph [0041] discloses "the information transfer precedes the arbitration so that the information contained in the data transfer may be used in the arbitration decision." In particular, Applicant's specification at paragraph [0036] discloses "As illustrated in Figure 9, the master is able to send information early because the arbiter permits early sending via the pseudo grant signal. The arbiter may request the slave to prepare for data transfer via the RAS1 and CAS1 signals because the arbiter can receive the information of the target slave early." Still further, Applicant's specification at paragraph [0038] discloses "At step 330, the arbiter receives drive information from all requesting master units. At step 340, based on the bus drive information and the status information of the target slave, a particular master is selected by

the arbiter.” The specification also discloses at paragraph [0007] “Based on the cycle type signal and the related target resource information, the arbiter determines the priority of bus ownership.”

Claim Rejections – 35 U.S.C. § 103

Claims 1-10 and 13-39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kenny. Claims 11-12 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Kenny as discussed above, and further in view of the Examiner’s citation of Wikipedia.

Applicant respectfully traverses these rejections.

The Examiner asserts at page 6 of the current Office Action that “with regard to claim 2, it is clear that the arbiter 4 further performs arbitration based on the transaction information such as the pre-assigned priority received from the requesting master.” However, the pre-assigned priority received from the requesting master is not information on a target slave for each requesting master unit. Further, the information contained in the ADD/REQ in Kenny is not used to determine a priority of bus ownership. Therefore, Kenny fails to disclose “the arbiter performs arbitration based on the information on the target slave unit for each requesting master unit by **using the information on the target slave unit for each requesting master unit to determine a priority of bus ownership for the requesting master units**” as required by claim 1.

Further, the Examiner asserts at page 12 of the current Office Action that “Since the virtual channel for each requesting master unit in Kenny has been pre-assigned using pre-assigned priority, it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate pseudo-grant signal GNTCHLNA, GNTCHLNB, and GNTCHLNC to all requesting masters beginning at the same time, because each channel for a specific requesting master unit has already been pre-assigned, and therefore, the arbiter 4 does

not have to arbitrate between masters resulting in generating/providing pseudo-grant signals to all requesting masters at different starting time.” The Examiner also asserts at page 12 of the current Office Action that “Kenny also disclose[s] that alternatively, each subsystem may be configured with a fixed virtual channel with pre-assigned priority....Thus, it is clear that by using pre-designating virtual channels and priorities for each module, the arbiter 4 does not have to arbitrate between requesting masters having different priorities, and assign a virtual channel to a requesting master according to its priority. Therefore, it would have been obvious to one of ordinary skill in the art to provide pre-grant signals to each requesting master unit for the purpose of reducing arbitration latency so that the overall system performance can be improved.”

Accordingly, as admitted by the Examiner in the above passages cited from the current Office Action, Kenny is directed to using only pre-assigned priorities for master units or virtual channels with a pre-assigned priority. In particular, if Kenny were to not use these master units with pre-assigned priorities or virtual channels with pre-assigned priorities, the Examiner would no longer have his alleged reason for one skilled in the art to generate pseudo-grant signals to all requesting masters at the same time. To the contrary, as noted above, the Examiner asserts that it is because of these pre-assigned priorities that “the arbiter 4 does not have to arbitrate between masters resulting in generating/providing pseudo-grant signal to all requesting masters at different starting times.” Accordingly, one skilled in the art would clearly not look to Kenny to find “the arbiter performs arbitration based on the information on the target slave unit for each requesting master unit by using the information on the target slave unit for each requesting master unit to determine a priority of bus ownership for the requesting master units” as required by claim 1.

Accordingly, claim 1 is patentable for at least the above reasons. Claims 14, 19, and 26 contain features somewhat similar to those discussed above in regard to claim 1, and therefore

claims 14, 19, and 26 are patentable for at least somewhat similar reasons as claim 1. Claims 2-13, 15-19, 20-25, and 26-39, which depend from one of claims 1, 14, 19, and 26, are patentable for at least the same reasons discussed above in regard to claims 1, 14, 19, and 26 as well as on their own merits.

In view of the above, Applicant respectfully requests the rejections under 35 U.S.C. § 103(a) be withdrawn.

New Claims

New claims 40-42, which depend from claim 1, are patentable for at least the same reasons discussed above in regard to claim 1 as well as on their own merits. For example, in regard to claim 42, Applicant respectfully submits that the ADD/REQ signal in Kenny is not both received in response to the pseudo grant signal and used by the arbiter to perform arbitration, and therefore, cannot be the transaction information as required by claim 42.

In regard to new claim 43, Kenny discloses “a master module initializes bus access by asserting address and bus request signals on the split-transaction bus...,[and] arbiter 4 identifies the master module making the request, determines the master module’s priority, and grants a virtual channel.” Accordingly, the master module of Kenny does not send any information to the arbiter 4 directly in response to virtual channel grant, which the Examiner alleges corresponds to the pseudo-grant signals of the present application. Further as noted above, the Examiner alleges the pre-assigned priorities are the transaction information, however, Kenny clearly discloses that the arbiter 4 assigns the virtual channels based on the pre-assigned priorities. Therefore, Kenny cannot receive the pre-assigned priorities directly in response to the pseudo-grant signals.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the claims in connection with the present application is earnestly solicited.

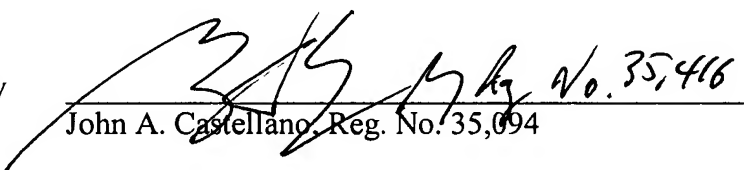
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By


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